

CLAIMS

1. Process for manufacturing a tire (1), of
5 the type comprising the following steps:
i - preparing a deformable preform for the carcass (3),
ii - holding this preform wound on a support of
circular general shape,
iii - continuing the manufacture of the tire, in a
10 manner known per se, with stretching of the preform
thus held, in an outward general direction, said
stretching being carried out after the fastening of the
free ends of the preform,
characterized in that:
15 - step i) furthermore includes the preparation of a
complementary preform comprising an elastic support
(S), of rectangular general shape, homologous with that
of said preform, provided with at least one conductor
(B1) fixed in a loose manner, also with a rectangular
20 general shape, and
- step ii) comprises holding this complementary preform
with the aforementioned preform, on the support of
circular general shape,
thereby making it possible to implant a conductive loop
25 (B1) inside the tire without significantly modifying

its manufacturing techniques.

2. Process according to Claim 1, in which
step i) furthermore includes the preparation of
deformable preforms for a sealing layer (4) and for a
5 radial carcass ply (3) of the tire,
characterized in that the complementary preform is
held, during step ii), between the two respective
preforms for the radial carcass ply (3) and for the
sealing layer (4).

10 3. Process according to either of Claims 1
and 2, characterized in that the conductor is shaped
during step i) so as to have the general shape of a
rectangular open loop (B1).

4. Process according to Claim 3,
15 characterized in that the two short sides of the
rectangular loop (B1) are joined during step ii) in
order to be substantially adjacent.

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20 5. Process according to ~~either of Claims 3~~
~~and 4~~, characterized in that step i) furthermore
includes the fixing of another loop (B3), homologous
with said open loop (B1), to the elastic support.

6. Process according to Claim 5,
characterized in that the loops (B1, B3) are fixed to
the elastic support (S) by a technique of the
25 overcasting or tacking kind.

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7. Process according to ~~either of Claims 5 and 6~~, characterized in that step i) furthermore includes the connecting of the loops to an active element and each loop to at least one electrical
5 component (C1).

8. Process according to Claim 7, characterized in that step ii) furthermore includes the implantation of said active element under the preform for the carcass (3).

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9. Process according to ~~either of Claims 5 and 6~~, characterized in that provision is made to leave the two free ends of each loop visible in order to connect them to an active element, and each end to at least one electrical component (C1) after either of
15 steps ii) and iii).

10. Tire, characterized in that it comprises, fixed under its tread, at least one conductive loop (B1) which has, when opened out flat, a rectangular general shape, the short side and the long
20 side of the rectangle extending substantially over the width of the tire and substantially right along its periphery, respectively.

11. Tire according to Claim 10, characterized in that its loop (B1) is designed to be
25 able to interact by electromagnetic coupling with at

least one loop (B2), tuned in terms of frequency (ω), and placed in the external proximity of the periphery of the tire.

12. Tire according to Claim 11,
5 characterized in that it furthermore includes an active element implanted under the tread and connected to the aforementioned loop (B1) so that it is capable of transmitting information relating to the state of the tire.

10 13. Tire according to one of Claims 10 to 12, characterized in that it includes another conductive loop (B3), suitable for delivering energy, especially electrical energy, for supplying an active element which is implanted under the tread.

15 14. Tire according to ~~either of Claims 12 and 13~~, characterized in that the active element includes a miniature sensor (2) placed so as to be sensitive to the radial acceleration of the tire.

20 15. Tire according to ~~one of Claims 12 to 14~~, characterized in that it includes a nonvolatile onboard memory (EEPROM) connected to the active element.

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